



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,739	12/08/2000	Shuichi Kagawa	1190 - 0478P	1102

7590 12/04/2003

BIRCH, STEWART, KOLASCH & BIRCH, LLP  
P. O. BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER

CAO, HUEDUNG X

ART UNIT PAPER NUMBER

2671

DATE MAILED: 12/04/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/731,739

**Applicant(s)**

KAGAWA ET AL.

**Examiner**

Huedung X Cao

**Art Unit**

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,12,13 and 16-22 is/are rejected.
- 7) ☐ Claim(s) 2,3,10,11,14,15,23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.                      6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 4-9, 12-13, and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagawa et al. (US 5917959)

As per claim 1, Kagawa teaches an image display device for receiving an input image data comprising three or more color data, and displaying the input image data on an image display unit (Kagawa, figure 58, and column 50, lines 1-3), comprising:

• Art Unit: 2671

a color converter for converting a first image data comprising three or more color data, into a second image data comprising three or more color data, on the basis of conversion characteristics data (Kagawa, column 49, line 4-column 50, line 65; and figures 58-59);

a conversion characteristics storage for storing the conversion characteristics data (Kagawa, column 25, lines 47-54; and figures 22 and 58);

conversion characteristics designation means for designating conversion characteristics to be used by the color converter, and outputting conversion characteristics designation data (Kagawa, column 49, line 4-column 50, line 65; and figure 58); and

conversion characteristics setting means for calculating the conversion characteristics data on the basis of the conversion characteristics designation data, and setting the conversion characteristics data in the conversion characteristics storage (Kagawa, column 25, lines 47-54; column 49, line 4-column 50, line 65; and figures 22 and 58);

wherein said conversion characteristics designation means comprises: chroma designation means for designating the chroma of the color represented by the second image data comprising three or more colors (Kagawa, column 3, lines 33-52); said color converter comprises:

a calculation term generator for receiving the first image data, and outputting calculation terms which are effective just for the specific hues (Kagawa, column 4, line 61-column 5, line 4; column 49, line 4-column 50, line 65).

• Art Unit: 2671

It would have been obvious for Kagawa's color conversion process (column 4, line 61-column 5, line 4) to implement a matrix calculation by using said calculation terms effective just for the specific hues because the improvement of color characteristics through a linear relationship representable by a matrix enhances the quality of the display image.

Claim 4 adds into claim 1, wherein said first image data include three color data of red, green and blue (Kagawa, column 49, lines 4-15).

Claim 5 adds into claim 4, wherein the chroma designation means comprises: means for selecting the color for which the chroma is designated (Kawaga, column 4, lines 61-column 5, line 4); and means for designating the chroma for the selected color (Kagawa, column 4, line 61-column 7, line 10).

Claim 6 adds into claim 5, wherein said colors for which the chroma is designated includes three colors of red, green and blue (Kagawa, column 3, lines 33-52).

Claim 7 adds into claim 5, wherein said colors for which the chroma is designated includes six colors of red, green, blue, yellow, magenta and cyan (Kagawa, column 7, lines 60-65).

Claim 8 adds into claim 5, wherein said conversion characteristics designation data include information indicating the color that has been selected by the chroma designation means; and information indicating the chroma designated for the selected color (Kawaga, column 4, lines 61-column 5, line 4; column 4, line 61-column 7, line 10).

• Art Unit: 2671

Claim 9 adds into claim 4, wherein said calculation term generator comprises: color extracting means for extracting chromatic and achromatic components from the first image data; and a polynomial calculator performing comparison operation on the chromatic components (Kagawa, figure 58).

Claims 12-13; and 16-22 are similar in scope to claims 1, and 4-9; therefore, they are rejected for the same reason.

***Allowable Subject Matter***

4. Claims 2-3, 10-11, 14-15, and 23-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

• Art Unit: 2671

***Inquires***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Huedung Cao** whose telephone number is **(703) 308-5024**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 305-0377.

Huedung Cao  
Patent Examiner



MARK ZIMMERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600